

**SITUATION REPORT
GOLD KING MINE RELEASE INCIDENT
U.S. ENVIRONMENTAL PROTECTION AGENCY**



Current conditions at Gladstone area near Gold King Mine.

Subject: EXECSUM / SITREP #51
Gold King Mine Release Incident
San Juan County, Colorado
Latitude: 37.8945 Longitude: -107.6384

From: Situation Unit, Gold King Mine Response

Date: 25 November 2015

Reporting Period: 0700 17 November 2015 through 0700 24 November 2015

Website: www.epa.gov/goldkingmine



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EXECUTIVE SUMMARY

Situation Summary

EPA Region 8 is managing the Gold King Mine Release. Ongoing field activities include water treatment and winterization activities at the Gold King Mine/Gladstone site.

EPA region 8 hired an avalanche specialist to evaluate site-specific avalanche potential around the Gold King Mine roads and portal. Based on the determination of continued potential for a high avalanche hazard, Operations made the decision to discontinue operations at the mine for the season. Operations at the mine adit were secured by 23 November 2015.

Highlights, Key Updates / Changes

Mine Operations / Water Treatment- Completed Activities

- Added an additional set of Geotube bags to the existing dewatering area.
- Installed a contingency concrete block retaining wall adjacent to the sump inside the mine. The purpose of the wall is to ensure that any excess water is directed to the sump.
- All water from the mine is gravity flowing to the Gladstone treatment system.
- Installed air-tight seal at mine portal to prevent air flow and potential freezing inside the mine.
- Completed concrete pour for steel sets inside Gold King Mine.
- Started steel set and lagging installation. Steel sets 1-5 were installed with lagging and rock bolts, and anchored to the adit.
- Continued demobilization and consolidation of all site equipment and supplies for the season at Gladstone.

Mine Operations / Water Treatment- Planned Activities

- Continue to treat water through the winter
- Installation of additional monitoring equipment (pond water level transducer and stream monitoring equipment) at Gladstone area. Equipment will provide continuous monitoring and remote monitoring capabilities for the system.
- Consolidation and demobilization of remaining equipment and supplies at Gladstone will be completed by 4 December 2015.
- Finalize water treatment building preparations for the winter.
- Develop plans for future investigation of Level 7 of Gold King Mine.
- Installation of additional ground support and flow control structures inside the mine.

Objectives

- Ensure health and safety of the public and responders.
- Continue private water deliveries to homes with Primary MCL Exceedances.
- Continue coordination with federal, state, tribal and local stakeholders.



Command Emphasis

For this reporting period, the command emphasis is:

- Safety of responders and the public
- Visitors to the mine site are required to go through a safety briefing. See Mine Site Safety Plan.

The metrics provided in this Situation Report represent quantities reported for work completed from 0700 17 November 2015 through 0700 24 November 2015. Highlighted text and metrics represent changes from previous SITREP. Press releases are presented in Attachment 1.



1.0 BACKGROUND

The Gold King Mine (GKM) near Silverton, Colorado is an historic gold mine at an elevation of approximately 11,300 feet above mean sea level. The mine discharge includes acidic mine drainage that is a contributor of heavy metals into the Cement Creek drainage of the Animas River watershed. The GKM workings have been inaccessible since 1995 when the mine portal collapsed.

On 5 August 2015, up to three million gallons (estimated) of water containing sediment and dissolved metals was suddenly released from the Gold King Mine adit. This water discharged into Cement Creek that feeds into the Animas River, and eventually flows into the San Juan River.

US EPA Region 8 continues to assess and mitigate effects from the release.

2.0 OPERATIONS

2.1 Mine Operations

2.1.1 Current Mine Operations Summary

- EPA region 8 hired an avalanche specialist to evaluate site-specific avalanche potential around the Gold King Mine roads and portal. Based on the determination of continued potential for a high avalanche hazard, Operations made the decision to discontinue operations at the mine for the season. Operations at the mine adit were secured by 23 November 2015.
- Added an additional set of Geotube bags to the existing dewatering area.
- Installed a contingency concrete block retaining wall adjacent to the sump inside the mine. The purpose of the wall is to ensure that any excess water is directed to the sump.
- All water from the mine is gravity flowing to the Gladstone treatment system.
- Installed air-tight seal at mine portal to prevent air flow and potential freezing inside the mine.
- Completed concrete pour for steel sets inside Gold King Mine.
- Started steel set and lagging installation. Steel sets 1-5 were installed with lagging and rock bolts, and anchored to the adit.
- Continued demobilization and consolidation of all site equipment and supplies for the season at Gladstone.



Steel sets and piping installed inside the Gold King Mine.

2.1.2 Mine Operations- Planned Activities

A partial list of additional planned activities at the GKM site include:

- Continue to treat water through the winter
- Installation of additional monitoring equipment (pond water level transducer and stream monitoring equipment) at Gladstone area. Equipment will provide continuous monitoring and remote monitoring capabilities for the system.



- Consolidation and demobilization of remaining equipment and supplies at Gladstone will be completed by 4 December 2015.
- Finalize water treatment building preparations for the winter.
- Develop plans for future investigation of Level 7 of Gold King Mine.
- Installation of additional ground support and flow control structures inside the mine.



Air seal installed at the Gold King Mine portal to prevent freezing inside the mine.

2.2 River Sampling

As of 23 November 2015, EPA Region 8 has completed data validation of all analytical results for sediment and surface water samples collected during the response.

The table below summarizes operational activities for surface water and sediment sampling during the response. Sample quantities are based on the SCRIBE database, and include field samples and quality assurance/quality control (QA/QC) samples.

Table 1- Operations River Sampling Summary		
Matrix	U.S. EPA Region	Cumulative
Surface Water Samples	8	739
	6	561
	9	310
	Total	1,610
Sediment Samples	8	349
	6	553
	9	256
	Total	1,158

2.3 Private Well Sampling

U.S. EPA has collected and analyzed samples from drinking water wells located near the Animas River and San Juan River. There has been no sampling of private drinking water wells in U.S. EPA Region 9. The table below provides a summary of private drinking water well sampling completed during the response.

Table 2- Private Drinking Water Well Sampling Summary		
Matrix	U.S. EPA Region	Cumulative
Private Drinking Water Well Samples Collected (from SCRIBE, includes QA/QC samples)	8	449
	6	309

Notes: Some residents received multiple results letters
Some residential sampling included surface water and/or sediment sampling.



Table 3 - Summary of Wells with MCL Exceedances

Matrix	U.S. EPA Region	Cumulative
Wells containing contaminant concentrations above MCLs during second sampling event	8	4
	6	1*

*Note: One well in Region 6 exceeded the MCL for lead and after further assessment by the State of New Mexico and the U.S. EPA, it was determined that the exceedance was not related to the GKM incident.

2.4 Public Support Activities

U.S. EPA continues to coordinate and deliver bottled drinking water to **four** residences in Region 8.

The table below summarizes other public support activities completed on the response to date.

Table 4 - Completed Public Support (Cumulative)

Activity	U.S. EPA Region	Qty. (gal)	Qty. (hay bales)	Qty. (salt blocks)
Potable Water Deliveries	8	105,600		
Livestock / Agricultural Water Deliveries	8	133,770		
	6	1,104,990		
	9	218,400		
	BIA	975,888		
Agricultural Food Deliveries	6		244	
	9		8,448	
Agricultural Salt Block Deliveries	8			500

3.0 PLANNING

The table below summarizes staffing numbers for the federal entities and agencies active at the Gold King Mine Site.

Table 5 - Personnel On-Site (as of 23 November 2015)

Location	Agency / Entity	Number of Personnel
Mine Operations	U.S. EPA	1
	U.S. Coast Guard	0
	U.S. EPA Contractors (Other-Daily average)	17
	Visitors	0
Total		18

USCG = U.S. Coast Guard.



4.0 FINANCE

4.1 Estimated Response Costs to Date

The table below summarizes estimated costs for the response.

Table 6 - Estimated Response Costs Reported as of 24 November 2015					
U.S. EPA Region	U.S. EPA Cumulative Expended Payroll	U.S. EPA Cumulative Expended Travel	U.S. EPA Cumulative Other Charges	U.S. EPA Cumulative Contractors Cost	Total Cumulative Costs
8	\$2,138,715	\$593,563	\$115,973	\$8,465,886	\$11,794,137
6	\$674,332	\$120,076	\$12,989	\$2,742,514	\$3,549,911
9	\$255,742	\$22,760	\$0	\$1,358,160	\$1,636,662
Total	\$3,068,789	\$736,399	\$128,962	\$12,566,560	\$16,980,710

4.2 Estimated Burn Rates

The table below summarizes current estimated burn rates for the response.

Table 7 - Estimated Daily Burn Rates as of 24 November 2015	
U.S. EPA Region	Estimated Average Daily Burn Rate
8	\$12,000
6	\$-
9	\$8,920
Total	\$20,920

5.0 SAFETY

Safety did not report any recordable injuries or illnesses during this operational period.

6.0 PUBLIC INFORMATION

6.1 Community Engagements, Public Events, and VIP/Congressional Visits

The table below summarizes recently completed site visits and public events.

Table 8 - Completed Site Visits and Public Events Summary	
Planned Event	Anticipated Date
Animas River Stakeholders Meeting	17 November 2015

The table below summarizes known site visits and public events scheduled for the next 14 days.

Table 9 - Anticipated Site Visits and Public Events Summary	
Planned Event	Anticipated Date
None Reported	N/A



6.2 Call Center / Notification Plan

U.S. EPA Headquarters continues to operate a national call center (844-607-9700).

Personnel at the EPA Region 8 call-in number are now managing the Gold King Mine Stakeholder Alert and Notification Plan.

7.0 ENTITIES PARTICIPATING IN RESPONSE

The list below summarizes Federal, regional, local and other entities participating in the response.

U.S. EPA
U.S. Coast Guard (USCG)
U.S. Geological Survey (USGS)
U.S. Army Corps of Engineers (USACE)
U.S. Bureau of Reclamation (USBOR)
U.S. Fish and Wildlife Services (USFWS)
Colorado Office of Emergency Management (OEM)
Colorado Department of Public Health and Environment (CDPHE)
New Mexico Environment Department (NMED)
New Mexico (NM) Department of Health
NM Office of the State Engineer
NM Department of Game and Fish
State of Utah
State of Arizona
City of Durango
La Plata County
San Juan County
San Juan Basin Health Department
County of San Juan – New Mexico
Southern Ute Indian Tribe (SUIT)
Navajo Nation

8.0 SOURCE OF ADDITIONAL INFORMATION

For additional information, refer to www.epa.gov/goldkingmine.



ATTACHMENT 1
PRESS RELEASES



Exec. Sum/SITREP #51 (25 November 2015)
Gold King Mine Release Incident
ICP Gold King

NO PRESS RELEASES FOR THIS REPORTING PERIOD
